SCH4R1 DEVELOPMENT OF ATOMIC THEORY - PART 1 WS-3

1. Who is credited, early on in history, with coming up with the notion that there is such a thing called an atom? Did this lad have any experimental evidence to support such an idea?

2. What did the term 'atom' mean?

3. The notion of the atom was abandoned due to an influential philosopher by what name? How many years went by before the idea of an atom resurfaced?

4. Who is credited with the regeneration of the atomic model? What was he attempting to do with his model?

5. Who is credited with the discovery of a particle smaller than the atom (a sub-atomic particle)? Describe his new model which still incorporated many of Dalton's ideas yet represented an enhancement to the model. Indicate how he incorporated the notion of positive and negative charges.

6. Models are designed to be tested. Successful models withstand the test of time so to speak. Describe the experiment created by Lord Rutherford to test Thomson's model. In doing so, indicate what the expected to observe, what he wound up observing, and how these observations resulted in a revision to the model.

7. What convinced scientists that there had to be another particle(s) in addition to the proton and the electron? Who discovered the neutron?

8. Where, in light of Rutherford's data, would the neutron have to be placed in the new model? Why?

9. Although Rutherford's model represented an improvement over its predecessors, what problem existed with it, that is, what could it not explain?